# High-Mu Triode— Sharp-Cutoff Pentode

**9-PIN MINIATURE TYPE** — **FRAME-GRID CONSTRUCTION**

*For Use as a Combined Voltage Amplifier and Video Output Tube in TV Receivers*

## ELECTRICAL

**Heater Characteristics and Ratings**

| | | |
|---|---|---|
| Voltage (AC or DC) | 6.3 ± 0.6 | V |
| Current at heater volts = 6.3 | 0.775 | A |
| Peak heater-cathode voltage (Each unit): | | |
| Heater negative with respect to cathode | 200 | V |
| Heater positive with respect to cathode | 200[a] | V |

**Direct Interelectrode Capacitances**[b]

| | | |
|---|---|---|
| *Triode Unit:* | | |
| Grid to plate | 3.7 | pF |
| Grid to cathode, pentode cathode, pentode grid No.3 & internal shield, and heater | 2.5 | pF |
| Plate to cathode, pentode cathode, pentode grid No.3 & internal shield, and heater | 2.4 | pF |
| Triode grid to pentode plate | 0.015 max | pF |
| *Pentode Unit:* | | |
| Grid No.1 to plate | 0.12 max | pF ← |
| Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater | 13.0 | pF |
| Plate to cathode & grid No.3 & internal shield, grid No.2, and heater | 4.8 | pF |
| Pentode plate to triode plate | 0.17 max | pF |

**Characteristics, Class $A_1$ Amplifier**

| | Triode Unit | Pentode Unit | | |
|---|---|---|---|---|
| Plate Supply Voltage | - | 125 | 200 | V |
| Plate Voltage | 200 | - | - | V |
| Grid-No.2 Supply Voltage | - | 125 | 125 | V |
| Grid-No.1 Supply Voltage | -2 | - | - | V |
| Cathode Resistor | - | 82 | 68 | Ω |
| Amplification Factor | 70 | - | - | |
| Plate Resistance (Approx.) | 17500 | 55000 | 75000 | Ω |
| Transconductance | 4000 | 21000 | 23000 | μmho |
| Plate Current | 4 | 16.5 | 20 | mA ← |
| Grid-No.2 Current | - | 3.1 | 3.5 | mA ← |
| Grid-No.1 Voltage (Approx.) for plate current = 100 μA | -4.5 | -4.2 | -4.2 | V |

← Indicates a change.

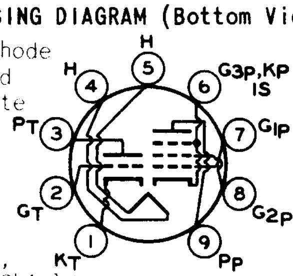
# 6KV8

## MECHANICAL

| | |
|---|---|
| Operating Position | Any |
| Maximum Overall Length | 2-5/8 in |
| Maximum Seated Length | 2-3/8 in |
| Length, Base Seat to Bulb Top (Excluding tip) | 2 ± 3/32 in |
| Diameter | 0.750 to 0.875 in |
| Dimensional Outline | See *General Section* |
| Bulb | T6-1/2 |
| Base | Small-Button Noval 9-Pin (JEDEC No.E9-1) |

### BASING DIAGRAM (Bottom View)

Pin 1 – Triode Cathode
Pin 2 – Triode Grid
Pin 3 – Triode Plate
Pin 4 – Heater
Pin 5 – Heater
Pin 6 – Pentode Cathode, Pentode Grid No.3, Internal Shield




9DX

Pin 7 – Pentode Grid No.1
Pin 8 – Pentode Grid No.2
Pin 9 – Pentode Plate

## AMPLIFIER — Class $A_1$

### Design-Maximum Ratings

| | *Triode Unit* | *Pentode Unit* | |
|---|---|---|---|
| Plate Voltage | 300 | 300 max[a] | V |
| Grid-No.2 (Screen-Grid) Supply Voltage | - | 300 max | V |
| Grid-No.2 Voltage | - | See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section | |
| **Grid-No.1 (Control-Grid) Voltage** | | | |
| Positive-bias value | 0 | 0 max | V |
| **Grid-No.2 Input** | | | |
| For grid-No.2 voltages up to 150 V. | - | 1 max | W |
| For grid-No.2 voltages between 150 and 300 V. | - | See *Grid-No.2 Input Rating Chart* at front of Receiving Tube Section | |
| Plate Dissipation | 1 | 5 max | W |

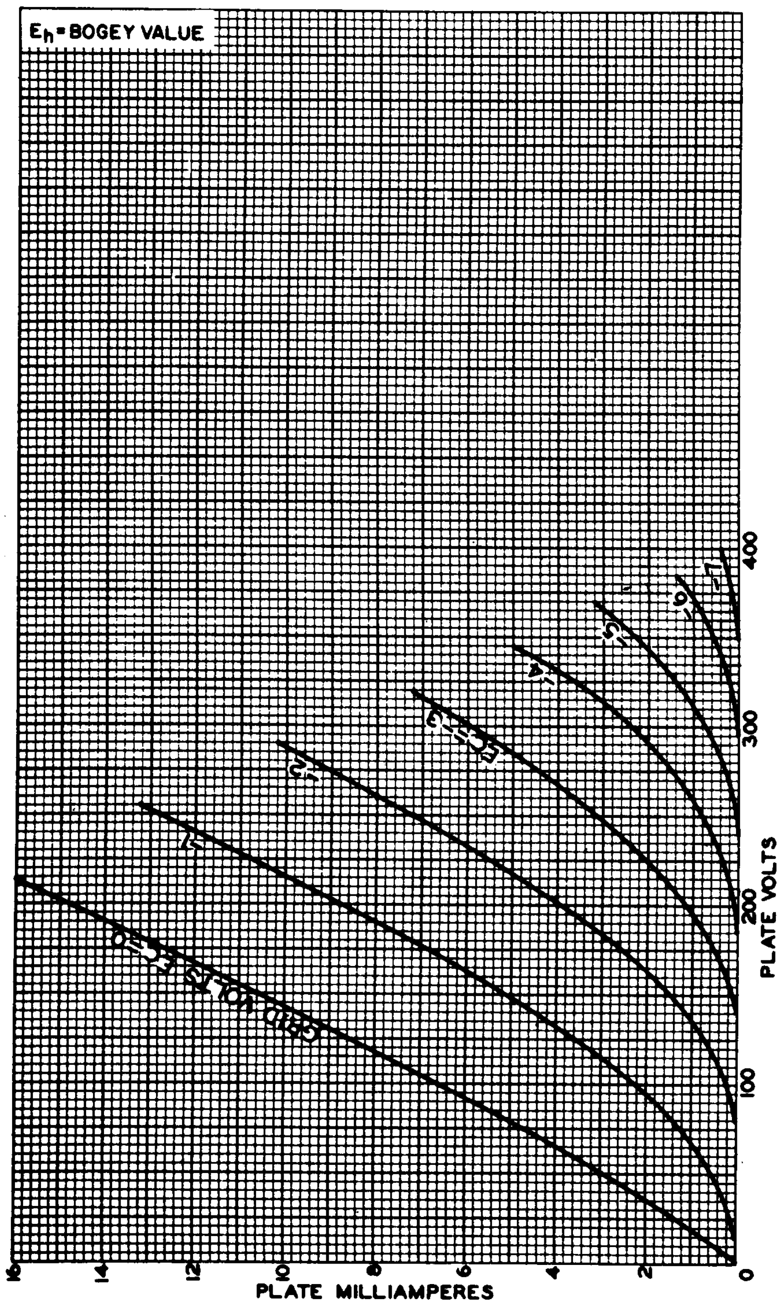
### Maximum Circuit Values

| | *Triode Unit* | *Pentode Unit* | |
|---|---|---|---|
| **Grid-No.1-Circuit Resistance** | | | |
| For fixed-bias operation | 0.5 | 0.1 max | MΩ |
| For cathode-bias operation | 1 | 0.25 max | MΩ |

[a] The dc component must not exceed 100 volts.

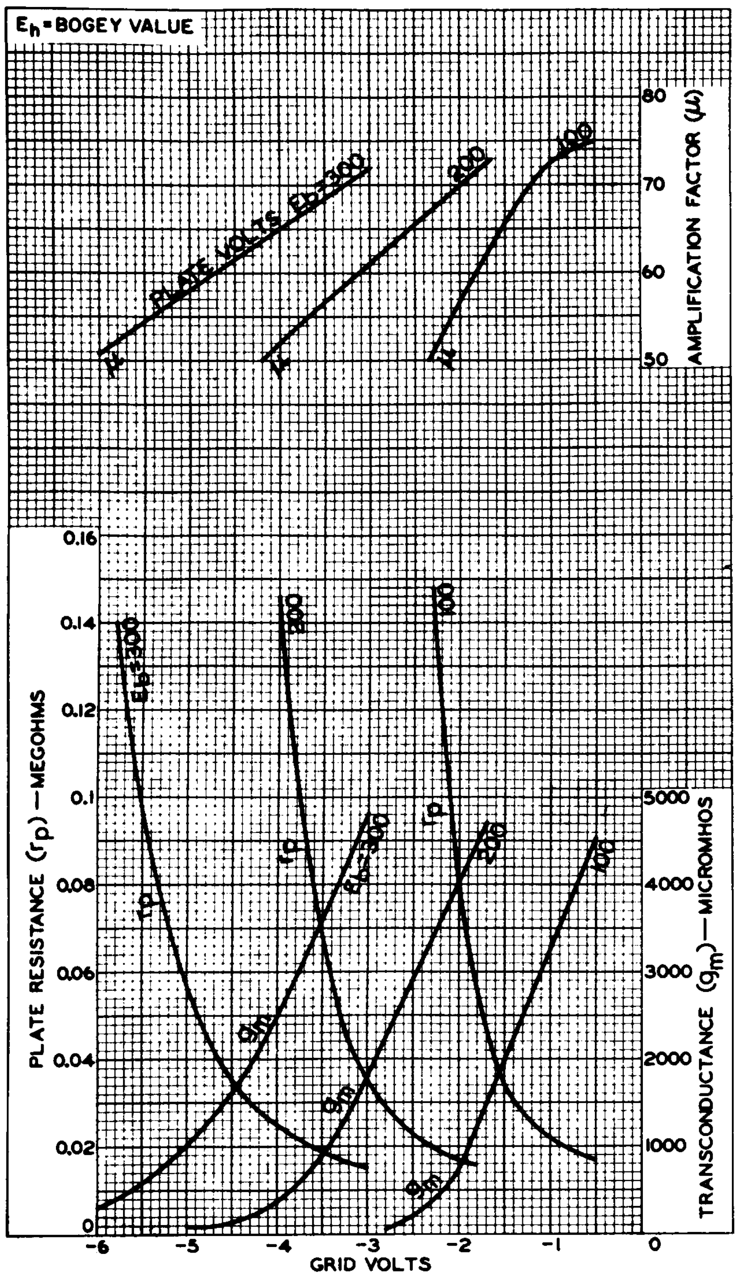
[b] Without external shield.

## Average Plate Characteristics
## Triode Unit




92CM-8644R1

## Average Characteristics
## Triode Unit

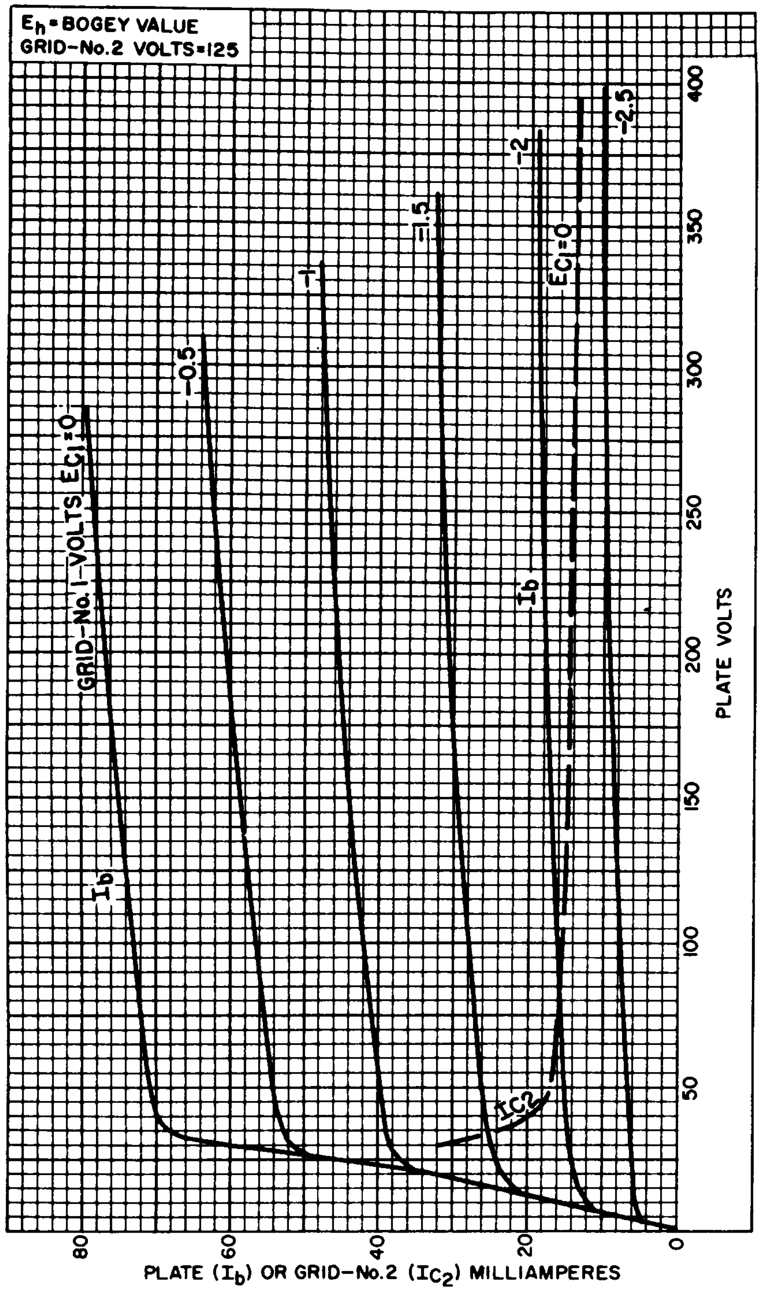



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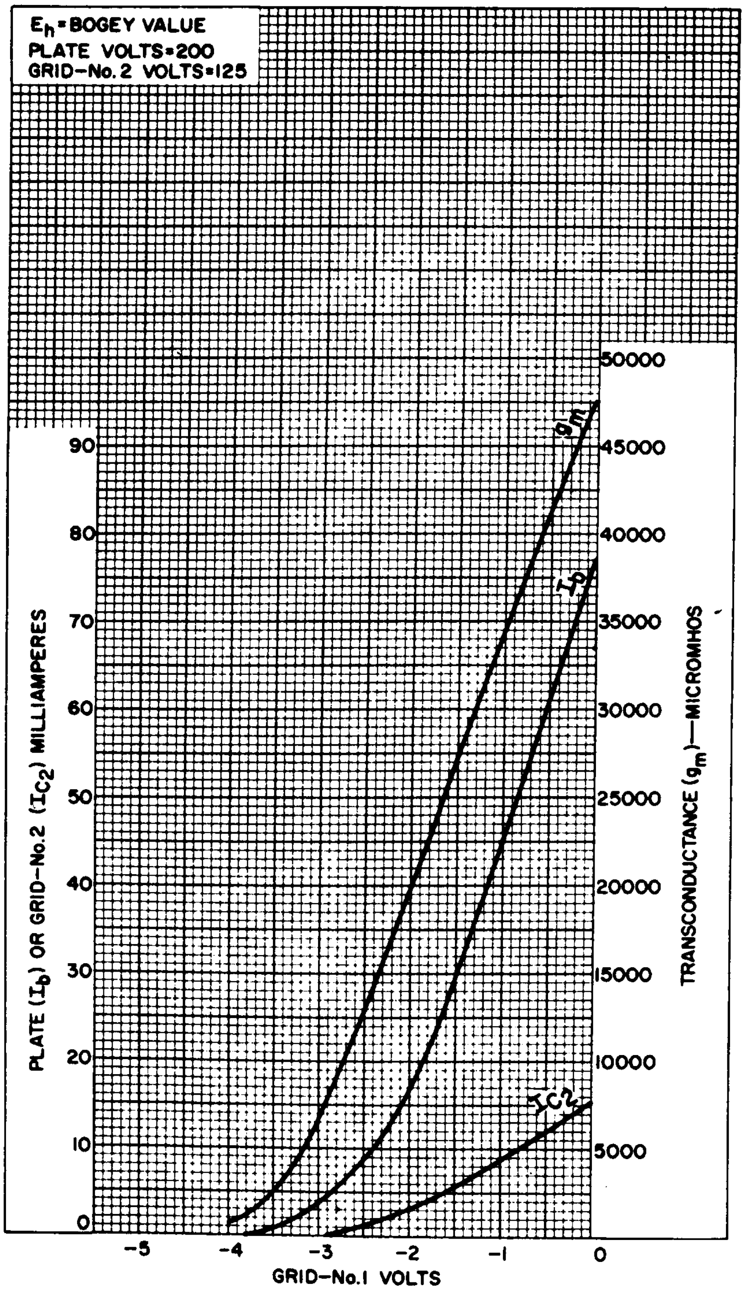
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## Average Characteristics
## Pentode Unit




92CM-11946R2

## Average Characteristics
## Pentode Unit




92CM-11947R2



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